The stomach becomes the last retreat of morbid excitement in many diseases, as I shall say hereafter in describing the manner in which death takes place. Most commonly this excitement discovers itself in sickness & vomiting, but occasionally it appears in that grade of morbid excitement which I have called preternatural hunger.

After what has been said of the cause of hunger you will easily understand the nature & cause of thirst. It is [and is like hunger a disease, induced by natural morbid excitement, or produced by locals or general]

This debility is generally brought on by ~~fear, pain, fa-~~
~~-tigue~~ debility, and by certain acrid Sub-
~~-stances~~ the Abstraction of the ca-
-stances acting directly upon the fauces.

These are ~~bad~~ principally salt meat,
and the fluids of the body rendered
acrid by external heat,
by the Abstraction of Aliment,
or the Suppression of Urine & perspira-
-tion. ~~It is induced likewise~~ in fever. ~~by fear.~~ ~~of the effects of~~
in enduring thirst, battles furnish constant
~~of this~~ ~~darings the authors are~~ proofs.
Soldiers generally call for water in ~~marcha-~~
~~-ing~~ meeting an enemy, also in flying
from them. Thirst is induced likewise
in some instances by the fear of surgi-
-cal operations, also by speaking in pub-
-lic in persons not accustomed to it.
Of the effects of pain we see instances
in persons ~~also~~ while submitting to pain-
-ful operations. Fatigue

seated in the ~~fauces~~ fauces. I infer this not only from its sensation directing us to that part of the body, but from its being allayed by washing the mouth and throat with cold water, and sucking sour fruit both of which act directly upon it. It is likewise a disease, ~~[illegible]~~ induced by natural morbid excitant.

There is in thirst ~~or~~ in hunger a precise ~~point or~~ grade at which it takes place which has been called the thirsty point. I infer this from the efforts which certain ~~substances~~ things have in removing it ~~which acts~~ by a stimulating or sedative operation. It is removed by the stimulus of opium, ~~and pain~~ & by the sedative operation of pain and fear. The effect of fear ~~is~~

* Hence the Spanish proverb in fevers

Its predisposing causes are such things as debilitate the fauces, such as the abstraction of the customary stimulus of drinks, and by such causes as debilitate the whole system particularly great heat and fatigue. Fear is likewise another of the causes which induce it by debilitating the system. Soldiers in advancing to battle, or retreating from the pursuit of an enemy generally call for water, and sometimes with their tongues protruded from their mouths from excessive thirst. Public speakers are likewise sometimes thirsty from fear. From the debility thus induced morbid excitement is induced in the fauces. But

It is sometimes chased away by Sleep. In this case a more powerful disease cures a weaker one ~~[illegible]~~ What is the cause of Sleep cures the morbid excitement of thirst, as it does many other light diseases. –

it is sometimes induced by causes which act directly upon the fauces. These are salt taking in undue quantities in our aliment, also the accumulating of the fluids acquired by the abstinence of aliment, or the suppression of the acid discharges of Urine, and perspiration. It occurs in fevers from the latter causes.

It is induced likewise by pain, and by intoxication, both of which act by throwing morbid excitement upon the fauces. —

It is removed by Opium which acts by equalizing excitement, as it does in many other local diseases.

In extreme thirst we call only for water — and for this plain reason.

I cannot dismiss the subject of hunger & thirst being diseases, without taking notice of their correspondence with the certain phenomena which take place in the natural & moral world. Calms create storms, & storms calms - peace produces war & war peace. - In like manner health produces disease; and disease health, by necessary & immutable laws of nature. Let no one assign the divine wisdom or goodness in any of them. In the human body the diseases of hunger & thirst are kindly given to us not only to prompt us to eat & drink, but greatly to increase the pleasure of both by means of contrast. The existence of those two Diseases there, or

turn over one leaf.

~~16~~ 15-5

By its sedative nature it overcomes the morbid excitement of thirst ~~so~~ sooner than ~~any~~ those liquors which possess with their coldness, a stimulating power.

I shall hereafter apply the ~~[illegible]~~ theory I have ~~been pointed to show the effects of appetite~~ delivered of the causes of hunger & thirst to pathology & ~~[illegible] in~~ to the cure of diseases. Eg: I shall say ~~it~~ shows more why a the absence of thirst is a prodigy the absence of disease to be diffused the ~~[illegible]~~

Having endeavoured to explain the nature of that property in the Stomach which disposes us to take food, I proceed to remark that all our Aliments ~~the~~ before they are ~~taken into the mouth~~ received by the Stomach are first ~~taken into~~ divided by means of the teeth. The more completely ~~this~~ they are thus divided, the

turn over two leaves.

four times every day by the pleasant stimulating or sedative remedies of eating and drinking, should ~~[illegible]~~ excite in us, the grateful feelings of a recovery from a transient indis-position.

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e lings
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more easily it is digested. Forty five grains of flesh well masticated and the same quantity not masticated were swallowed in a tube. In the usual time of digestion, 18 grains of the former, and but four grains of the latter were dissolved. ~~The~~ The following circumstances ~~in the~~ respecting the teeth deserve notice. 1 We shed them ~~twice~~ in childhood, because the first set ~~are~~ do not grow with the jaw. If this were not the case, they would be ~~not~~ seperated from ~~the~~ jaw, and of course, be weak and easily broken. The second set of teeth grow from new alveolar processes. They are incapable of reintegration.

2

2 The teeth are inserted in a part of the jaw, which is of a spongy nature. This is wisely intended to prevent them being injured by concussion.

3 They are of a conical figure which enables them to bear more pressure than if they were perfectly square.

4 The upper jaw teeth or molares have three prongs in order probably to prevent their entering the antrum maxillare. They as it were surround it.

5 Carnivorous animals cut and rip their food only – Granivorous animals cut and grind their food only. Man does both. The projection of the upper foreteeth over the lower foreteeth prevents both being injured or unnecessarily

wear in the act of grinding. —

The aliment during its mas-
-tication is moistened by the saliva
which is poured forth by the act of
mastication from the parotid, the
sublingual and maxillary glands.
The tongue serves the important
purpose of moving the ~~mas~~ food
into such parts of the mouth as
to favour the action of the teeth
upon it. It afterwards protrudes
it into the fauces, from whence
it passes by the tonsils, velum
palati, and Epiglottis assisted by
the action of a great number of

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small muscles into the Oesophagus and from thence into the stomach where it undergoes the process of Digestion. Before I proceed to inquire into the nature of this function, I shall deliver a few remarks upon the

Stomach.

1 It is a most important viscus, and hence we find it is possessed by all animals, the tænia hydatigena excepted. more Animals want brain than Stomachs.

2 It is formed like the teeth upon the compound principles of

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Carnivorous & herbivorous Ani=
=mals.

3 It is so full of nerves that it may be compared to a tuberous expansion of the brain.

4 Its nerves are of two kinds. One left which ~~is~~ are derived from the great intercostal, is for the hyp=
=post of what Bichat calls its or=
=ganic life; ~~the~~ or for its sensations and common motions, the other left which is derived from the par Vagum & 8th pair ~~for~~ ~~its seems to [illegible]~~ impacts to it its peculiar

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fundation as an Organ of appetite.
— See! here Gent: the uniformity
in the structure of the senses. brain
& stomach! they appear to have
been formed by one & the same
rule, and to be governed by the
same laws.' — It is ~~[illegible]~~ by the
latter fact of nerves ~~to stomach~~
that the stomach is chiefly
and most closely connected
with the brain.
5 The stomach next to the brain
has the most extensive con-
=nection by means of sympathy

or Association with every other part of the body. It is from this circumstance Van Helmont supposed the soul to be seated in it. Diseases pass into the system, and pass out of it by means of this organ. It is the index of the nervous system, ~~and~~ nearly as much so as ~~the~~ face of a Clock is the index of the ~~motions~~ state of the motions which go forward in that peice of ~~a~~ machinery. It is further the index of the ~~mind~~ state of the mind. ~~and~~

~~the Lymph~~. It becomes us never to lose sight of it in our inquiries into the seat, and grades of disease.

6 In its function as ~~a digestion~~ an organ of digestion, it performs a very high office, such as the Alchemists have in vain sought for in their crucibles, and that is a power of transmutation. It changes the ~~the~~ nature of the most heterogeneous substances when taken into it, and converts them into a matter from which are derived chyme, chyle, blood, and all the secretions of the body. = p. 621